

**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>FP2004-145WO</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/019380</b>	International filing date ( <i>day/month/year</i> ) <b>24.12.2004</b>	Priority date ( <i>day/month/year</i> ) <b>25.12.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>G01N35/00, G01N1/28, G01N35/02</b>		
Applicant <b>ARKRAY, INC.</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input checked="" type="checkbox"/> Box No. VII Certain defects in the international application <input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/019380

Box No. I

Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/019380

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-23	YES
	Claims		NO
Inventive step (IS)	Claims	3-7, 13, 14, 20, 21, 23	YES
	Claims	1, 2, 8-12, 15-19, 22	NO
Industrial applicability (IA)	Claims	1-23	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
<p>Document 1: JP 7-167865 A (Hoffman La Roche AG), 4 July 1995, paragraphs [0021] to [0023]; fig. 12</p> <p>Document 1 sets forth a method of raising the temperature of a sample housed in a reaction vessel having a cover (sealing part), wherein the amount of heat supplied to the reaction vessel is determined according to the temperature of the cover part and the ambient temperature.</p> <p>Document 2: CD-ROM of the specification and drawings annexed to the Japanese Utility Model Application No. 57894/1992 (Laid-open No. 14968/1994) (Kabushiki Kaisha Nittec), 25 February 1994, paragraphs [0011] and [0012]</p> <p>Document 2 sets forth a method of raising the temperature of a sample housed in a reaction vessel, wherein the amount of heat supplied to the reaction vessel is determined according to the outside air temperature, thereby making it possible to heat the sample to a set temperature and maintain the sample at said temperature without being affected by the outside air temperature.</p>			

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/019380

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>Document 3: JP 11-83802 A (Oki Electric Industry Co., Ltd.), 26 March, [abstract], paragraph [0011]</p> <p>Document 3 sets forth a method of raising the temperature of a sample placed on a stage, wherein the temperature is raised while estimating the temperature of the sample according to a correlation between the temperature difference between the stage temperature and the sample temperature investigated beforehand.</p> <p>Document 4: JP 9-189703 A (Olympus Optical Co., Ltd.), 22 July 1997, paragraphs [0023] and [0024]</p> <p>It would be easy for a person skilled in the art to conceive of the inventions set forth in claims 1, 10, 15 and 22 in the light of the inventions set forth in documents 1 and 2.</p> <p>Claims 2 and 16</p> <p>In the invention set forth in document 1, the cover of the reaction vessel is provided with a temperature sensor which measures the temperature of the cover (sealing part).</p> <p>Claims 3 to 7, 13, 14, 20, 21 and 23</p> <p>Document 1 (paragraph [0022]) indicates that the temperature of a sample is estimated from the temperature of a unit heater. Moreover, document 3 indicates that the temperature of a sample is estimated based on the correlation of a temperature difference between the stage temperature and the sample temperature investigated beforehand.</p> <p>However, the inventions set forth in claims 3 to 7,</p>

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/019380

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>13, 14, 20, 21 and 23 are not disclosed in any of the documents cited in the international search report, and would not be obvious to a person skilled in the art.</p> <p>Claims 8, 9, 11, 17 and 18</p> <p>The invention set forth in document 1 is provided with a unit heater which heats by coming into contact with the reaction vessel.</p> <p>Claim 12</p> <p>Varying the amount of energy supplied over time is a matter which a person skilled in the art could accomplish as necessary.</p> <p>Claim 19</p> <p>Document 1 (paragraph [0022]) indicates that the temperature of a sample is estimated from the temperature of a unit heater. In addition, document 3 indicates that the temperature of a sample is estimated based on the correlation of a temperature difference between the stage temperature and the sample temperature investigated beforehand.</p>

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/019380

**Box No. VII**      **Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

Claim 14 refers back to claim 14 itself.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/019380

**Box No. VIII**      **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 21 contains the wording "the aforementioned estimated temperature", but claim 15 does not contain the wording "estimated temperature", therefore the meaning of "aforementioned" in "the aforementioned temperature" set forth in claim 21 is unclear.